

Serial Number: 09/756,983

ENTERED

Changed a file from non-ASCII to ASCII

Changed the margins in cases where the sequence text was "wrapped" down to the next line.

Edited a format error in the Current Application Data section, specifically:

Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____

Added the mandatory heading and subheadings for "Current Application Data".

Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

Changed the spelling of a mandatory field (the headings or subheadings), specifically:

Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

Inserted colons after headings/subheadings. Headings edited included:

Deleted extra, invalid, headings used by an applicant, specifically:

Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file; page numbers throughout text; other invalid text, such as _____

Inserted mandatory headings, specifically:

Corrected an obvious error in the response, specifically:

Edited identifiers where upper case is used but lower case is required, or vice versa.

Corrected an error in the Number of Sequences field, specifically:

A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected:

Other: Seq. 1 - corrected amino acid numbering

DRAFT

Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

#2
OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001

TIME: 08:41:47

Input Set : N:\Crf3\02052001\I756983.raw
 Output Set: N:\CRF3\02132001\I756983.raw

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1 <110> APPLICANT: Albani, Salvatore
2 <120> TITLE OF INVENTION: METHODS FOR ISOLATION, QUANTIFICATION,
3   CHARACTERIZATION AND MODULATION OF
4   ANTIGEN-SPECIFIC T CELLS
5 <130> FILE REFERENCE: 246/285-CIP
6 <140> CURRENT APPLICATION NUMBER: US/09/756,983
7 <141> CURRENT FILING DATE: 2001-01-09
8 <150> PRIOR APPLICATION NUMBER: 60/105,018
9 <151> PRIOR FILING DATE: 1998-10-20
10 <150> PRIOR APPLICATION NUMBER: 09/421,506
11 <151> PRIOR FILING DATE: 1999-10-19
12 <150> PRIOR APPLICATION NUMBER: PCT/US99/2466
13 <151> PRIOR FILING DATE: 1999-10-19
14 <160> NUMBER OF SEQ ID NOS: 24
15 <170> SOFTWARE: FastSEQ for Windows Version 4.0
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 17
19 <212> TYPE: PRT
20 <213> ORGANISM: Artificial Sequence
21 <220> FEATURE:
22 <223> OTHER INFORMATION: Synthesized peptide derived from third hyper V
23   region of IE molecule Mus musculus
24 <400> SEQUENCE: 1
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25      1           5                   10                  15
26
27   Ala
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30 <211> LENGTH: 15
31 <212> TYPE: PRT
32 <213> ORGANISM: Artificial Sequence
33 <220> FEATURE:
34 <223> OTHER INFORMATION: Synthesized peptide derived from bole I protein
35   of Epstein Barr virus
36 <400> SEQUENCE: 2
      Thr Arg Asp Asp Ala Glu Tyr Leu Leu Gly Arg Glu Ser Val Leu
37      1           5                   10                  15
38
40 <210> SEQ ID NO: 3
41 <211> LENGTH: 16
42 <212> TYPE: PRT
43 <213> ORGANISM: Artificial Sequence
44 <220> FEATURE:
45 <223> OTHER INFORMATION: Synthesized peptide derived from the hemophilus
46   influenza virus
47 <400> SEQUENCE: 3
48   Thr Ser Phe Pro Met Arg Gly Asp Leu Ala Lys Arg Glu Pro Asp Lys
49      1           5                   10                  15
51 <210> SEQ ID NO: 4

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001
TIME: 08:41:47

Input Set : N:\Crf3\02052001\I756983.raw
Output Set: N:\CRF3\02132001\I756983.raw

52 <211> LENGTH: 36
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54 <213> ORGANISM: Artificial Sequence
55 <220> FEATURE:
56 <223> OTHER INFORMATION: Synthesized peptide derived from the TCR receptor
57 gene of Mus musculus
58 <400> SEQUENCE: 4
59 Leu His Ile Ser Ala Val Asp Pro Glu Asp Ser Ala Val Tyr Phe Cys Ala Ser
60 1 5 10 15
61 Ser Gln Glu Phe Phe Ser Ser Tyr Glu Gln Tyr Phe Gly Pro Gly Thr
62 20 25 30
63 Arg Leu
64 35
66 <210> SEQ ID NO: 5
67 <211> LENGTH: 9
68 <212> TYPE: PRT
69 <213> ORGANISM: Artificial Sequence
70 <220> FEATURE:
71 <223> OTHER INFORMATION: Synthesized peptide derived from the influenza virus
72 <400> SEQUENCE: 5
73 Gly Ile Leu Gly Phe Val Phe Thr Leu
74 1 5
76 <210> SEQ ID NO: 6
77 <211> LENGTH: 9
78 <212> TYPE: PRT
79 <213> ORGANISM: Artificial Sequence
80 <220> FEATURE:
81 <223> OTHER INFORMATION: Synthesized peptide derived from the influenza virus
82 <400> SEQUENCE: 6
83 Val Lys Leu Gly Glu Phe Tyr Asn Gln
84 1 5
86 <210> SEQ ID NO: 7
87 <211> LENGTH: 11
88 <212> TYPE: PRT
89 <213> ORGANISM: Artificial Sequence
90 <220> FEATURE:
91 <223> OTHER INFORMATION: Synthesized peptide totally artificial
92 <223> OTHER INFORMATION: Xaa in position 2 stands for cyclohexylalanine
93 <400> SEQUENCE: 7
94 Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala
95 1 5 10
97 <210> SEQ ID NO: 8
98 <211> LENGTH: 13
99 <212> TYPE: PRT
100 <213> ORGANISM: Artificial Sequence
101 <220> FEATURE:
102 <223> OTHER INFORMATION: Synthesized peptide derived from the influenza virus
103 <400> SEQUENCE: 8
104 Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr

RAW SEQUENCE LISTING
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TIME: 08:41:47

Input Set : N:\Crf3\02052001\I756983.raw
Output Set: N:\CRF3\02132001\I756983.raw

105 1 5 10
107 <210> SEQ ID NO: 9
108 <211> LENGTH: 17
109 <212> TYPE: PRT
110 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Synthesized peptide derived from the ovalbumin
113 of Mus musculus
114 <400> SEQUENCE: 9
115 Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
116 1 5 10 15
117 Arg
119 <210> SEQ ID NO: 10
120 <211> LENGTH: 15
121 <212> TYPE: PRT
122 <213> ORGANISM: E. coli
123 <220> FEATURE:
124 <223> OTHER INFORMATION: dnaJpl heat shock protein
125 <400> SEQUENCE: 10
126 Gln Lys Arg Ala Ala Tyr Asp Gln Tyr Gly His Ala Ala Phe Glu
127 1 5 10 15
129 <210> SEQ ID NO: 11
130 <211> LENGTH: 15
131 <212> TYPE: PRT
132 <213> ORGANISM: Homo sapiens
133 <400> SEQUENCE: 11
134 Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly
135 1 5 10 15
137 <210> SEQ ID NO: 12
138 <211> LENGTH: 9
139 <212> TYPE: PRT
140 <213> ORGANISM: Homo sapiens
141 <400> SEQUENCE: 12
142 Gly Ile Leu Gly Phe Val Phe Thr Leu
143 1 5
145 <210> SEQ ID NO: 13
146 <211> LENGTH: 9
147 <212> TYPE: PRT
148 <213> ORGANISM: Homo sapiens
149 <400> SEQUENCE: 13
150 Val Lys Leu Gly Glu Phe Tyr Asn Gln
151 1 5
153 <210> SEQ ID NO: 14
154 <211> LENGTH: 13
155 <212> TYPE: PRT
156 <213> ORGANISM: Homo sapiens
157 <400> SEQUENCE: 14
158 Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
159 1 5 10

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001

TIME: 08:41:47

Input Set : N:\Crf3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

161 <210> SEQ ID NO: 15
 162 <211> LENGTH: 313
 163 <212> TYPE: PRT
 164 <213> ORGANISM: Artificial Sequence
 165 <220> FEATURE:
 166 <223> OTHER INFORMATION: Fusion constructs with human and bacterial sequences
 167 <400> SEQUENCE: 15
 168 Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr
 169 1 5 10 15
 170 Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys
 171 20 25 30
 172 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
 173 35 40 45
 174 Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
 175 50 55 60
 176 Tyr Trp Gln Lys Glu Lys Met Val Leu Thr Met Met Ser Gly Asp
 177 65 70 75 80
 178 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
 179 85 90 95
 180 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
 181 100 105 110
 182 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
 183 115 120 125
 184 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr
 185 130 135 140
 186 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile
 187 145 150 155 160
 188 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
 189 165 170 175
 190 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp
 191 180 185 190
 192 Pro Glu Thr Glu Leu Tyr Ala Val Ser Glu Phe Gly Gly Ser Gly Gly
 193 195 200 205
 194 Ser Ala Thr Pro Gln Asn Ile Thr Asp Leu Cys Ala Glu Tyr His Asn
 195 210 215 220
 196 Thr Gln Ile His Thr Leu Asn Asp Lys Ile Phe Ser Tyr Thr Glu Ser
 197 225 230 235 240
 198 Leu Ala Gly Lys Arg Glu Met Ala Ile Ile Thr Phe Lys Asn Gly Ala
 199 245 250 255
 200 Thr Phe Gln Val Glu Val Pro Gly Ser Ile Asp Ser Gln Lys
 201 260 265 270
 202 Lys Ala Ile Glu Arg Met Lys Asp Thr Leu Arg Ile Ala Tyr Leu Thr
 203 275 280 285
 204 Glu Ala Lys Val Glu Lys Leu Cys Val Trp Asn Asn Lys Thr Pro His
 205 290 295 300
 206 Ala Ile Ala Ala Ile Ser Met Ala Asn
 207 305 310
 209 <210> SEQ ID NO: 16
 210 <211> LENGTH: 942

RAW SEQUENCE LISTING DATE: 02/13/2001
PATENT APPLICATION: US/09/756,983 TIME: 08:41:47

Input Set : N:\Crfr3\02052001\I756983.raw
Output Set: N:\CRF3\02132001\I756983.raw

DNA
ISM: Artificial Sequence
RE:
INFORMATION: Fusion constructs with human and bacterial sequences
NCE: 16
ccaca cacggaggca gggAACatca ccatccaAGT gtccatacct caatttcTTT 60
cttgg tgcgtggctgg ttTTTctcac ttctgttcaG gtgttatcaA cgtgaccaAG 120
gaaAG aagtggcaAC getgtccTGT ggtcacaATG ttTctgttGA agagctggCA 180
tcgCA tctactggCA aaaggagaAG aaaatggTC tgactatGAT gtctggggAC 240
tataT ggcccgaGta caagaACCGG accatCTTG atatcactAA taacCtCC 300
gatCC tggctctGG cccatCTGAC gaggGCACAT acgagtGtgt gtGttctGAAG 360
aaaAG aegctttCAA gcgggAACAC ctgctGAAG tgacGTTATC agtcaaAGCT 420
cccta caacTAGTAT atctyACTTT gaaATTCCAAt cticiaAtAt tagaaggATA 480
ctcaa CCTCTGGAGG ttTTCCAGAG CCTCACCTCT CTCGGTTGGA aaATGGAGAA 540
aaATG ccatcaACAC AACAGTTCC caagatCCTG aaACTGAGCT ctatGCTGTT 600
atTCG gggGCTCAGG tggtagCGCC acacCTCAAA atattactGA ttGtGtGCA 660
ccaca acacacaAAAT acatacGCTA aatGataAGA tatTTTcGTA tacagaAtCT 720
tggAA aaAGAGAGAT ggctatCATT actTTAAGA atggTgCAAC ttTTCAAGTA 780
accAG qtGtcaACA tataGATTCA caaaaaaaaAG cgattGAAAG gatGAAAGGAT 840
tgagGA ttGcatatCT tactGAGCT aaagtGAAA agttatGtgt atGGAataAT 900
cgccTC atGCG ttGc CGCAATTAGT atGCAAAAt AA 942

ID NO: 17
TH: 1056
DNA
ISM: Artificial Sequence
RE:
INFORMATION: Fusion constructs with human and bacterial sequences
NCE: 17
gactGA gtaacattCT ctttgtatG gcccTTCTGc tctctggTC tyctcCTCTG 60
ttcaAG ctTatTCaA tgagactGCA gacGtGCCAT gccaATTGc aaACTCTCAA 120
aaAGCC tgagtGAGCT agtagtATTT tggcaggACC aggaaaaACTT ggttCTGAt 180
tataCT taGGCAAAGA gaaATTGAC aGtGTTCAtt ccaAGTATAt gggccGcaca 240
ctgatt cggacAGTT gaccCTGAGA ctTCacaATC ttcaGATCAA ggacaAGGGC 300
atcaAt gtatcatCCA tcacaaaaAG cccacAGGAA tgatTCGAT ccaccAGATG 360
ctgAAC tGTCAGTGTCT tgctaaCTC agtcaACCTG aaATAGTACt aatttCTAAt 420
caGAAA atGtGtACAT aaATTtGACt tgctcatCTA tacacGGtA cccAGAACt 480
agatGA gtGTTTGTCT aagaACCAAG aatCaaCTA tGAGtATGA tggTATTATG 540
aatCTC aagataAtGT cacAGaACTG tAcGACGTT ccatCAGtTtGtCTGTTtCA 600
ctgtATG ttacGAGCAAt tatGaccATC ttGtGTTAtC tggAAACTGA caAGACGCGQ 660
tatCTT cacCTTCTC tataGAGtTtG gggacCCtC AGCTCCCCC agaccACGAA 720
cgGgCT cccGtGgtAG cGCCACACt cAAAtATtTA ctGATTtGtG tGcAGAAAtAC 780
acacAC aAAtACAtAC gctAAAtGAt aAgAtATTT cgtatacAGA atCTCTAGtG 840
aaAGAG agatGGCTAt cattACTTTt aagaAtGGtG caactTTCA agtGAGAtG 900
gtAGtC aacAtAtAGA ttCacaAAAAA aAGcGATtG aaAGGAtGAA ggatACCTG 960
ttGcat atCTTACTGt agtcaAAAGtG gaaaAGtTtGtGAtGAA taAtAAACG 1020
AtGcGA ttGCGCAAt tagtAtGGAa aAttAA 1056

ID NO: 18
TH: 351
. PRT

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001
TIME: 08:41:48

Input Set : N:\Crf3\02052001\I756983.raw
Output Set: N:\CRF3\02132001\I756983.raw

L:94 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:7
L:94 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:7
L:94 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:7

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001
TIME: 08:09:09

Input Set : N:\Crf3\02052001\I756983.raw
Output Set: N:\CRF3\02132001\I756983.raw

**Does Not Comply
Corrected Diskette Needed**

1 <110> APPLICANT: Albani, Salvatore
2 <120> TITLE OF INVENTION: METHODS FOR ISOLATION, QUANTIFICATION,
3 CHARACTERIZATION AND MODULATION OF
4 ANTIGEN-SPECIFIC T CELLS
5 <130> FILE REFERENCE: 246/285-CIP
6 <140> CURRENT APPLICATION NUMBER: US/09/756,983
7 <141> CURRENT FILING DATE: 2001-01-09
8 <150> PRIOR APPLICATION NUMBER: 60/105,018
9 <151> PRIOR FILING DATE: 1998-10-20
10 <150> PRIOR APPLICATION NUMBER: 09/421,506
11 <151> PRIOR FILING DATE: 1999-10-19
12 <150> PRIOR APPLICATION NUMBER: PCT/US99/2466
13 <151> PRIOR FILING DATE: 1999-10-19
14 <160> NUMBER OF SEQ ID NOS: 24
15 <170> SOFTWARE: FastSEQ for Windows Version 4.0

ERRORED SEQUENCES

17 <210> SEQ ID NO: 1
18 <211> LENGTH: 17
19 <212> TYPE: PRT
20 <213> ORGANISM: Artificial Sequence
21 <220> FEATURE:
22 <223> OTHER INFORMATION: Synthesized peptide derived from third hyper V
region of IE molecule Mus musculus
24 <400> SEQUENCE: 1
25 Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val Asp Lys
E--> 26 1 5 10 15 misaligned
27 Ala
439 <210> SEQ ID NO: 24
440 <211> LENGTH: 285
441 <212> TYPE: PRT
442 <213> ORGANISM: Artificial Sequence
443 <220> FEATURE:
444 <223> OTHER INFORMATION: Fusion constructs with human and bacterial sequences
445 <400> SEQUENCE: 24
446 Met Val Cys Leu Lys Phe Pro Gly Gly Ser Cys Met Ala Ala Leu Thr
447 1 5 10 15
448 Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr
449 20 25 30
450 Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn
451 35 40 45
452 Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu
453 50 55 60
454 Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr
455 65 70 75 80

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001

TIME: 08:09:09

Input Set : N:\Crf3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

456 Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu
457 85 90 95
458 Leu Glu Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr
459 100 105 110
460 Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Tyr Pro Glu Val
461 115 120 125
462 Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu
463 130 135 140
464 Val Cys Ser Val Asn Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp
465 145 150 155 160
466 Phe Arg Asn Gly Gln Glu Glu Lys Thr Gly Val Val Ser Thr Gly Leu
467 165 170 175
468 Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr
469 180 185 190
470 Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser
471 195 200 205
472 Leu Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala
473 210 215 220
474 Gln Ser Lys Gly Gly Ser Gly Ser Ala Gln Leu Lys Lys Lys Leu
475 225 230 235 240
476 Gln Ala Leu Lys Lys Asn Ala Gln Leu Lys Gln Lys Leu Gln Ala
477 245 250 255
478 Leu Lys Lys Leu Ala Gln Gly Ser Gly Gly Ser Ala Gly Gly Gly
479 260 265 270
480 Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His
481 275 280 285

E--> 482
E--> 483

1

2

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/756,983

DATE: 02/13/2001

TIME: 08:09:10

Input Set : N:\Crf3\02052001\I756983.raw

Output Set: N:\CRF3\02132001\I756983.raw

L:26 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:94 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:7
L:94 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:7
L:94 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:7
L:482 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:24
M:332 Repeated in SeqNo=24